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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

APPELLANT: George G. Gelfer CONFIRMATION NO. 5685
SERIAL NO.: 09/481,477 GROUP ART UNIT: 3629
FILED: January 11, 2000 EXAMINER: Naresh Vig
TITLE: "METHOD AND ARRANGEMENT FOR AUTOMATICALLY
ORDERING SUPPLIES WHICH ARE CONSUMED DURING
USAGE OF A DEVICE"

MAIL STOP APPEAL BRIEF-PATENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPELLANT'S MAIN APPEAL BRIEF

S I R:

In accordance with the provisions of 37 C.F.R. §41.37, Appellant herewith submits his main brief in support of the appeal of the above-referenced application.

REAL PARTY IN INTEREST:

The real party in interest is Francotyp-Postalia GmbH, as the successor to Francotyp-Postalia AG & Co. KG, a German corporation, the owner by Assignment from the inventor.

RELATED APPEALS AND INTERFERENCES:

There are no related appeals and no related interferences.

STATUS OF CLAIMS:

Claims 1-7, 9-40 and 42 are the claims on appeal, and constitute all pending claims of the application. Each of claims 1-7, 9-40 and 42 currently stands rejected.

Claims 8 and 41 were cancelled during prosecution before the Examiner.

STATUS OF AMENDMENT:

No Amendment was filed subsequent to the final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER:

A perspective view of a postage meter machine 1 of the type T1000 manufactured by Francotyp-Postalia AG & Co., and modified in accordance with the invention, is shown from the left front according to Figure 1. (p.7, l.11-13) The postage meter machine 1 has an internal modem and, for example for recrediting, is connectable via a first data connection 14 to a data center 100 that has a data bank 130. (p.7, l.13-15) A chip card 10, for example, serves the purpose of setting the postage meter machine to a cost center under which the accounting is to be undertaken. (p.7, l.15-17) The postage meter machine 1 has a cassette compartment 7 that must be opened for an introduction of a thermal transfer inking ribbon cassette 9. (p.7, l.17-19) When opening before and/or during removal of the cassette, which a sensor (not shown) detects, the internal microprocessor generates a display text and a warning against the removal of a cassette 9 supplied by the manufacturer appears on the display of a user interface 4 which also warns against continued operation of the postage meter machine 1 with a different cassette because the removed cassette 9 cannot be re-employed. (p.7, l.19 - p.8, l.1) A marking in the form of a bar code is impressed on the inking ribbon at its beginning. After insertion of the new inking ribbon cassette into the postage meter machine, detection of this marking is automatically implemented with an optical scanner (not shown) in order to communicate the data content of the marking to the control unit of the postage meter machine 1, in addition to a communication between the control unit of the postage meter machine 1 and the data center 100 being implemented, and if an inking ribbon supplied by the manufacturer is recognized as a result, the microprocessor initiates display of an Aokay@ message, and an error message (call

service) is displayed when the data center was incapable of recognizing an inking ribbon supplied by the manufacture. (p.8, l.11) Simple, physical identifications can be used, for instance gluing on a bar code label that can be read with a simple scanner or in some other way with physical or chemical measures. (p8, l.11-15)

In a first version, an order ensues after a comparison of a consumption quantity relative to a threshold. The microprocessor executes indirect or direct measuring routine that is adapted to the nature of the supply item and that generates the consumption quantity. The threshold can be pre-programmed by the manufacturer, can be entered by keyboard or can be loaded by chip card or by modem from the remote data center 100. (p.8, l.17-22)

In a second version, generation of a message to the customer and a user input that is interpreted as acknowledgment that an order is to be triggered, ensue first. The order is triggered after a message is generated and communicated to the data center 100. The message can be encrypted in order to preclude an unauthorized order. A customer can also be given the possibility to modify the amount of the supply item to be ordered by using the user interface 4. (p.9, l.1-6)

The order numbers for various supply items are listed in a list that is stored in non-volatile fashion in a memory of the device 1. This list can likewise be loaded with a chip card 10 or by modem from the remote data center 100. The use of such a list represents a considerable logistic advantage by allowing various supply items - independently of their type - to be ordered with the same method and without service personnel being required. (p.9, l.22 - p.10, l.4)

The order number can be multi-part. A first part or field is composed of an ordering code that is assigned only to a specific group of supply items that can be

reordered for the particular device 1 and that also enables a documentation that the order had been automatically triggered by the device itself without entry by a person. An identification number forms a second part and identifies the type of supply item. An optional, third part can contain the item amount and an optional, fourth part can contain a checksum for checking the order for errors. The ordering number together with further data forms the aforementioned message. (p.10, l.5-12) The manufacturer of the supply item generates an order code belonging to a specific group of supply items and generates an identification number for the type of supply item. It is assumed, for example, that an ordering code is incorrect for an ink tank cassette if the serial number belongs to a device with a thermal-transfer printing unit because the ink tank cassette, of course, does not belong to the group of supply items for thermal transfer printers. (p.10, l.12-17) The allocation of the ordering code to a specific group of supply items is stored in a data bank in the form of a data set together with a reference ordering code and together with the serial number of the device. This ordering code has a predetermined relationship to the reference ordering code. (p.10, l.17-21)

A block circuit diagram that applies to the postage meter machine 1 (shown in Figure 1) or to some other arbitrary device is explained on the basis of Figure 2. Such a device has a microcomputer (μ C) 19 for controlling the user interface 4 formed by a keyboard and a display with a controller, and for controlling a modem 13 and a printer 17 and/or other actuators that are not shown and that are connected to the microcomputer 19 via an input/output interface 18.(p.11, l.6-11) Inventively, a scanner 15 is connected to the input/output interface 18 or a comparable means for entry of at least parts of ordering numbers for supply items is connected thereto.

Further sensors such as an encoder 90 and a letter sensor 91 are connected in a known way. For detection of the removal or replacement of the supply item, at least one detector 16 is connected to the input/output interface 18. (p.11, l.11-16)

The detector 16 allows the presence of a supply item to be directly or indirectly identified according to a physical interaction principle, if the supply item is a solid body. For example, the supply item is an inking ribbon for the postage meter machine 1 according to Figure 1. (p/11, l.20-23) A data connection 14 connects the modem 13 to the data center 100. The scanner 15 can be omitted when the ordering number is entered by user interface 4 and is communicated to the data center 100 via the modem 13 and the data connection 14. (p.11, l.23 - p.12, l.3)

In the postage meter machine 1a according to Figure 4 the supply item is an ink tank filled with ink. This embodiment likewise employs a modem and of a sensor that recognizes the approach of the replacement or the insertion of a new supply item. The postage meter machine 1 a has a sensor and a control unit with a processor that is programmed, after the recognition, to generate a message and to display it and may also interpret a user input made in conjunction with the order, this being communicated to the data center by modem as an encrypted ordering message. (p.13, l.13-19)

Figure 4 is a perspective view of a postage meter machine 1a of the JetMail7 type, available from Francotyp-Postalia AG & Co. and modified in accordance with the invention. (p.14, l.5-7)

A microprocessor (μ P) 46 (shown in Figure 6) of the postage meter machine 1a monitors the filling level of an ink tank 95 (shown in Figure 5) with an ink depletion sensor 92. The sensor 92 is in contact with two electrodes and in the JetMail7

already emits a depletion signal - to provide a margin of safety - when a maximum of 200 frankings are still possible in order to avoid an incompletely printed franking print format due to lack of ink. As warranted, the microprocessor 46 generates a display text for display in the display 43: THE INK SUPPLY IS NEARLY USED. PLEASE REPLACE THE INK TANK AS SOON AS POSSIBLE! REMAINING IMPRINTS: 200. (p.15, l.5-13)

A contact is automatically closed when inserting or replacing the new supply item. As a result of this contact, the postage meter machine 1a recognizes that a new supply item has been installed. Dependent on a perforation encoding on the back side of the ink tank 95, the original ink type (red for mail, fluorescent red, etc.) can be detected with suitably fashioned contacts. (p. 16, l. 10-14)

Upon reaching an ink level before the ink tank begins to operate with a reserve quantity of ink, or given a low ink level after a depletion signal has been emitted, i.e. when fewer than 200 frankings are possible, a user-selectable threshold is reached that triggers an automatic ordering of the supply item, an ink tank in this case. A connection to the data center 100 (Figure 1) of the manufacturer is set up for that purpose. (p. 16, l. 14-18)

All modern postage meter machines currently are already equipped with a modem in order to be able to communicate with the data center 100 of the manufacturer. This normally serves the purpose of getting a credit amount loaded from the data center 100 when the corresponding memories have been emptied due to franking. (p.16, l.19 - p17, l.1) The transmission of the order message requires an additional communication routine. (p.17, l.1-2)

The data center 100 receives the order message for the ink tank cassette 95 together with a serial number of the postage meter machine 1a or of its security module. A search is made for the matching code in the group of stored reference ordering codes. If a match is found, the order of the supply item is considered authentic. (p.17, l.8-12)

Figure 6 shows a block circuit diagram of the postage meter machine 1a of the JetMail7 type having a processor 46 and a base including an integrated scale 20, a rate PROM 22, a modem 53 and a detector 96 that recognizes the replacement or the insertion of a new ink tank cassette 95. (p.17, l.12-15) The rate PROM 22, alternatively, can be realized in the memory module 51, 52 (shown with broken lines) within the meter. Alternatively, the direct measurement with the detector 96 can be replaced by an indirect measuring method that utilizes the existing sensors 92 and 97. (p.17, l.15-18) The microprocessor 46 is programmed such that the number of remaining imprints after every activation of the device and/or replacement of the supply item is displayed. After a consumption of ink, a predetermined remainder of ink is detected with the electrodes 93, 94 and with the sensor 92 and is communicated via a sensor/actuator control 59, and a sensor/actuator control interface 58 (which can be an ASIC) to the microprocessor 46, which subsequently generates a display. A predetermined remainder of ink that suffices for approximately 200 imprints remains when the conductivity between the contacts 93, 94 falls below a predetermined threshold. Switching the postage meter machine 1a on/off via the switch 71 can be detected via the sensor 97 that is likewise connected to the sensor/actuator control 59. A deactivation at the time when the postage meter machine 1a has only the remaining ink available to it can indicate an impending

replacement. By comparing the counted imprints to a limit value or by counting down from a predetermined number, a number of remaining imprints before the complete depletion of ink can be identified, an automatic ordering routine then being triggered. The microprocessor 46 is programmed for interpreting a predetermined counter reading for the remaining imprints when sensors 97 and 92 acquire a reactivation and an ink level. The microprocessor 46, sensor 92 and electrodes 93, 94 at the ink tank cassette 95 are provided for recognizing the approach of a replacement of the ink tank cassette 95. On the basis of an identifier this supply item, the order number thereof can be generated, this being characteristic for a specific ink.

A security module 60 serves as a first accounting module and has a hardware accounting unit 63 and a battery-supported, non-volatile memory 61 in which a credit can be loaded by modem 53. An OTP (one-time programmable) processor 66 thereby carries out security routines both for recrediting as well as for securing the registered data with a MAC (message authentication code). The advantage of the security module 60 is that the check of the dependability and the approval of the inventive franking and posting machine, which is carried out by the mail carrier, is then only required for the appertaining security module 60 and the connected printer module 55-57. (p.17, l.19 - p.18, l.3)

The data center 100 (Fig. 1), after determining the order for the supply item, automatically generates an acknowledgment of this order and sends it to the device 1a. Given notification by modem, the microprocessor 46 thereof is programmed to generate a message and to display it via the display 43. The notification of the order can also ensue in a known way via postcard. (p.20, l.14-18)

After determining the order of the supply item, the data center 100 automatically generates an invoice addressed to the ordering entity and sends it. alternatively, an agreement can already be made at the time of purchase that the data center 100, after determining the order of the supply item, will initiate an automatic debiting from the account of the ordering entity in conformity with the price of the ordered supply item. (p.20, l.19-23)

GROUND OF REJECTION TO BE REVIEWED ON APPEAL:

Whether the subject matter of claims 1-7, 9, 10, 13-18, 21-36, 39 and 40 would have been obvious to a person of ordinary skill in the field of designing systems for replenishing a supply item that is consumed during the operation of a device, under the provisions of 35 U.S.C. §103(a), based on the teachings of United States Patent No. 5,305,199 (LoBiondo et al.) in view of the teachings of United States Patent No. 5,970,475 (Barnes et al.) and United States Patent No. 6,351,716 (Froger et al.); and

Whether the subject matter of claims 11, 12, 19, 20, 37, 38 and 42 would have been obvious to a person of ordinary skill in the field of designing systems for replenishing a supply item consumed during the operation of a device, under the provisions of 35 U.S.C. §103(a) based on the teachings of LoBiondo et al., Barnes et al. and Froger et al., further in view of the teachings of an excerpt from the operating manual for the Canon Multipass C500 Ink Jet Printer (Canon).

ARGUMENT:

Rejection of Claims 1-7, 9, 10, 13-18, 21-36, 39 and 40 Under 35 U.S.C. §103(a), Based on LoBiondo et al., Barnes et al. and Froger et al.

An initial final rejection was rendered by the Examiner dated May 5, 2005, in response to which Appellant filed a Notice of Appeal on July 28, 2005. Shortly

thereafter, when attempting to prepare Appellant's Main Brief, Appellant's representative noted that although the rejection of the above-cited claims in the Final Rejection was stated to be based on the teachings of LoBiondo et al. and Barnes et al., the text substantiating that rejection made extensive reference to another reference designated only as "Frogger." No patent number for that reference was provided in the text of the May 5, 2005 Final Rejection, nor was that rejection accompanied by Form PTO-892 identifying that reference, or any other reference.

In view of the inability of Appellant to prepare an Appeal Brief, in view of the lack of identification of this reference, Appellant's representative telephoned the Examiner several weeks before the due date of Appellant's Brief, to inform the Examiner of this deficiency in the Final Rejection. In that conversation, the Examiner informed Appellant's representative that the "Frogger" reference was United States Patent No. 6,351,716 (which, as noted above, names Froger et al. as the inventors, rather than "Frogger". The Examiner in that discussion also agreed to withdraw the previous Final Rejection and substitute a new Final Rejection wherein, according to the Examiner, the "Frogger" reference would be properly identified and the rejection would be revised to specifically refer to that reference.

The Examiner did not issue such a substitute Final Rejection until December 21, 2005, but that rejection still incorrectly refers to the rejection of the above-cited claims as being based only on LoBiondo et al. and Barnes et al., and still incorrectly refers to the Froger et al. reference as "Frogger" in the substantiation of that rejection. Moreover, there still has not been any "official" identification of the actual patent number for the so-called "Frogger" reference in the papers sent to Appellant's representative.

In order to avoid further delays, however, Appellant is proceeding with the present Appeal Brief on the basis of the Examiner's oral statement communicated to Appellant's representative that the "Frogger" reference does, in fact, designate United States Patent No. 6,351,716 (Froger et al.).

Appellant's response to the rejection of the above-cited claims based on a combination of the teachings of LoBiondo et al. and Barnes et al. and Froger et al. is as follows. The method and arrangement of independent claims 1 and 27, respectively, are for the purpose of precluding a user of a device that consumes a supply item during the normal operation thereof, from ordering a supply item that is not actually used by the device operated by the user. This precludes the user from ordering supply items that are not actually used in the device operated by that user, and then re-selling those supply items to others.

In the method and arrangement in independent claims 1 and 27, this is accomplished by the user generating an ordering message, that not only identifies the supply item for which re-ordering is requested, but also includes an identification code that permits the supplier, at the supplier's data center, to identify the entity that has placed the ordering message. The data center compiles a data bank that identifies at least one permissible supply item that is associated with the entity that has placed the order, and the data center will permit the order to be filled only if the item that the entity is currently requesting is among the permissible items that the entity is authorized to order. If the entity is requesting an item that is not permissible for that particular entity, the order is not filled.

The LoBiondo et al. reference is not concerned at all with providing any such security or matching procedure. As the Examiner has noted, the LoBiondo et al.

reference at column 3, lines 42-47 describes steps that can be taken at the supply point by personnel at the supply point, however, there is no teaching that the personnel at the supply point, either manually or with computer assistance, undertake any checking as to whether the requested order is legitimate or erroneous. In the entirety of the LoBiondo et al. reference, there is no statement whatsoever regarding the possibility of an order being rejected or turned down at the supply point. According to the teachings of LoBiondo et al., orders are filled at the supply point with no questions being asked.

The Examiner is relying on the Barnes et al reference as providing teachings regarding an order-filling system wherein the items that can be supplied to a requesting entity (customer) are limited to items in a catalog list that is made available to the ordering entity. Dependent on the access level associated with a particular ordering entity, only a limited number of items from the entire catalog list are made available to the particular ordering entity. In substantiating these teachings of the Barnes et al reference, the Examiner cited statements from the Barnes et al reference from the introductory portion thereof. In view of their introductory nature, these statements are extremely general, and the actual details of the method and system disclosed in the Barnes et al are provided at subsequent passages in the Barnes et al reference. The basic steps for placing and filling an order in the context of the Barnes method and system are described at column 6, lines 33-65 of the Barnes et al reference. As can be seen from this more detailed explanation of how the Barnes et al method and system operate, the Barnes et al method and system differ in several significant respects from the subject matter disclosed and claimed in the present application.

First and foremost, as in the LoBiondo et al reference, there is no possibility discussed in the Barnes et al reference of a requested order not being filled. This is because in the Barnes et al method and system, before a customer places an order, the customer is given the aforementioned catalog list, the contents of which may be restricted depending on the access level of the customer. The customer places an order only after already being provided with this (possibly limited) catalog list, but once the customer is presented with the customer list that is suitable for that customer, the customer is free to order any item on that catalog list. Therefore, a customer's order, since it can only be selected from the list that is presented to the particular customer, can never include an item that is not on the presented list, and therefore there is no possibility for the customer to place an order that cannot be filled from the list. Thus, the Barnes et al method and system prevent the customer from ever generating an order that cannot be filled, because the customer is permitted to create the order only by selecting from a catalog list that is specifically designed so as *not* to include any items for which the particular customer in question is not authorized (by virtue of the customer's access level).

Moreover, the Barnes et al system defeats the possibility of being conducted completely automatically or completely electronically, because a manual selection by the customer must be made after the customer is presented with a list that is determined dependent on the customer's access level. Thus, it is necessary for a series of back-and-forth communications to take place between the customer and the order-filling facility. The customer must first identify himself or herself so that the customer's access level can be ascertained. Dependent on that access level, the customer is then presented, in a further communication, with an appropriate

customer list. The customer must then make a selection from that list and communicate that selection, in a further communication, to the order-filling facility.

The Examiner relies on the Froger et al. reference as providing a teaching to monitor the consumption of ink in an ink cartridge and to generate various types of warning indications as the ink in the ink cartridge is consumed. Appellant acknowledges that the Froger et al. reference provides such teachings, but in this regard the Froger et al. reference is no different from hundreds if not thousands of patents that provide a general teaching to monitor one or more consumable items during the operation of a device. Appellant cited a number of examples of such patents in the introductory portion of the present specification. The Froger et al. reference, however, provides no teachings at all with regard to any type of re-ordering procedure taken in response to the quantity of the consumable item becoming low or exhausted. Appellant acknowledges that it is common in many types of devices to initiate some type of automatic procedure if such a situation occurs, but the Froger et al. disclosure is not concerned with the details of such a re-ordering procedure, but only provides details regarding the monitoring itself. The Froger et al. reference, therefore, provides no relevant teachings to the re-ordering procedure that would result if the LoBiondo et al. system were modified in accordance with the teachings of Barnes et al.

Claim 1 makes clear that such back-and-forth communication is precluded, by stating that the ordering message is generated in the device, and only after this ordering message has already been generated (in the device) it is communicated from the device to the data center, by establishing a communication between the device and the data center. In the Barnes et al reference, it is not possible for an

ordering message to be generated until *after* at least two communications have previously occurred between the customer and the order-filling facility.

Claim 1 makes clear that the order is filled only if the requested supply item conforms to at least one permissible supply item, and otherwise the order is not filled. As noted above, neither the LoBiondo et al reference nor the Barnes et al reference contemplates the possibility of an order not being filled, and the Froger et al. reference provides no teachings at all that are relevant to a re-ordering procedure.

Therefore, even if the LoBiondo et al system were modified in accordance with the teachings of Barnes et al. and Froger et al., a method as set forth in claim 1 still would not result. Moreover, since neither of those references contemplates the possibility of an order not being filled, a person of ordinary skill in the field of designing order-filling systems would have no reason to even consult those references for the purpose of designing a method or a system wherein it is expressly intended that, under appropriate conditions, an ordering message for a supply item might not be filled.

Independent claim 27 claims operation of the control unit in the event that an ordering message is determined, at a remote data center, not to be authentic. Claim 27 requires that the control unit modify the operation of the device that transmitted the ordering message, if a message of the aforementioned type is received from the remote data center. As noted above, since in either the LoBiondo et al nor the Barnes et al reference contemplates the possibility of an ordering message not being authentic, and since Froger et al. does not disclose any type of re-ordering procedure there is no teaching in any of those references to modify a device from

which the ordering message originated in the event that the ordering message is not authentic. As discussed above, the LoBiondo et al reference is simply not concerned in any way with checking whether an incoming order is authentic or not. All incoming orders in the LoBiondo et al system, with no questions being asked. As also discussed above, the Barnes et al reference is specifically designed to prevent a non-authentic ordering message from ever being received, and therefore the Barnes et al reference does not provide any teachings as to how the method or the system disclosed in that reference would respond to a non-authentic message. Claim 27, therefore, would not have been obvious to a person of ordinary skill in the field of designing order-filling facilities and methods, based on the teachings of LoBiondo et al and Barnes et al. and Froger et al.

Claims 2-7, 9, 10, 13-18 and 21-26 add further steps to the non-obvious method of claim 1, and therefore would not have been obvious to a person of ordinary skill in the relevant field based on the teachings of LoBiondo et al and Barnes et al. and Froger et al., for the same reasons discussed above in connection with claim 1. Similarly, claims 28-36, 39 and 40 add further structure to the non-obvious arrangement of independent claim 27, and therefore would not have been obvious to a person of ordinary skill in the relevant field based on the teachings of LoBiondo et al., Barnes et al. and Froger et al. for the same reasons discussed above in connection with claim 27.

Rejection of Claims 11, 12, 19, 20, 37, 38 and 42 Under 35 U.S.C. §103(a) Based on LoBiondo et al., Barnes et al., Froger et al. and Canon

The Examiner relied on the Canon reference as teaching various details regarding the content of an electronically-generated message that can be used to re-order a consumed supply item, such as an ink cartridge in an ink jet printer. As with

the Froger et al. reference, Appellant does not have a significant disagreement with the Examiner's statements concerning the teachings of the Canon reference, but simply having knowledge of the electronically-generated items described in the Canon reference does not provide a person of ordinary skill in the field of designing a supply item re-ordering system or procedure with any instructions or guidance as to how the items included in the re-ordering message should be used at the supply location to which the message is transmitted. Just as in the Froger et al. reference, the Canon reference provides teachings that concern only actions that occur at the device itself, and does not provide any teachings regarding the details of how the information generated at the device is used at the supply location. For example, simply because the Canon reference teaches the generation of an identification number and the inclusion of such an identification number in a re-ordering transmission, this does not necessarily mean that such an identification number is used, for example, for authentication purposes at the supply location. It could merely be used as a logging indicator to keep a record at the supply location of the particular supplies that have been re-ordered from the device identified by the identification number. The Canon reference provides no teachings in this regard.

In view of Appellant's arguments above traversing the rejection of independent claims 1 and 27 based on the teachings of LoBiondo et al., Barnes et al. and Froger et al., adding the teachings of the Canon reference to that combination does not result in a sustainable rejection of any of dependent claims 11, 12, 19, 20, 37, 38 or 42, all of which depend from either claims 1 or 27, and thus embody the subject matter thereof.

None of claims 11, 12, 19, 20, 37, 38 or 42, therefore, would have been obvious to a person of ordinary skill in the field of designing supply item re-ordering systems under the provisions of 35 U.S.C. §103(a).

CONCLUSION:

For the above reasons, Appellant respectfully submits the Examiner is in error in law and in fact in rejecting claims 1-7, 9-40 and 42. Reversal of those rejections is proper, and the same is respectfully requested.

This Appeal Brief is accompanied by a check in the amount of \$500.00 for the requisite fee.

Submitted by,

Steven H. Noll (Reg. 28,982)

SCHIFF, HARDIN LLP
CUSTOMER NO. 26574

Patent Department
6600 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606
Telephone: 312/258-5790
Attorneys for Appellant.

CERTIFICATE OF MAILING

I hereby certify this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on May 17, 2006.

Steven H. Noll

STEVEN H. NOLL

CLAIMS APPENDIX

1. A method for automatically ordering a supply item which is consumed during operation of a device, comprising the steps of:

electronically monitoring, in a device, a consumption quantity associated with consumption of a supply item during operation of said device and repeatedly electronically comparing said consumption quantity to a threshold representing consumption of said supply item before complete depletion of said supply item;

upon said consumption quantity reaching said threshold, automatically electronically generating an ordering message at said device representing an order for a requested supply item, and including an identification code in said ordering message, and only thereafter establishing a communication between said device and a data center and communicating said ordering message from said device to said data center;

at said data center, electronically identifying, based on said identification code, an entity which has placed said ordering message;

at said data center, electronically compiling a data bank containing respective identification codes for a plurality of different ordering entities, each ordering entity having at least one permissible supply item associated therewith; and

upon receipt of said ordering message at said data center, electronically conducting an ordering routine at said data center including searching said data bank to find the ordering entity associated with the identification code in the ordering message and filling said order only if said requested supply item conforms to said at least one permissible supply item, and otherwise not filling said order.

2. A method as claimed in claim 1 comprising selecting said predetermined consumption quantity from the group consisting of a time quantity, a physical quantity, a monetary quantity and an accounting quantity, dependent on said supply item.

3. A method as claimed in claim 1 wherein said consumption quantity is an item count and wherein the step of monitoring said predetermined consumption quantity and repeatedly comparing said consumption quantity to a threshold comprises incrementing said item count as said supply item is consumed, and comparing said item count to a predetermined counter reading as said threshold.

4. A method as claimed in claim 3 wherein said device comprises a printing device and wherein said supply item comprises an inking ribbon cassette used during printing in said device, and wherein the step of incrementing said item count comprises incrementing said item count upon each imprint which is made on said inking ribbon cassette, and wherein said predetermined counter reading comprises a number of said imprints which is less than a total number of imprints accommodated by said inking ribbon cassette.

5. A method as claimed in claim 3 wherein said device is a printer device and wherein said supply item comprises ink contained in an ink tank cassette which

is used during printing and wherein said item count comprises an amount of said ink from said ink tank which is consumed during each imprint produced by said printer device, and wherein said predetermined counter reading is an ink volume, represented by a plurality of said imprints, which is less than a total volume of ink in said ink tank cassette.

6. A method as claimed in claim 1 wherein said device is a printer device and wherein said supply item is ink contained in an ink tank cassette which is used for printing by said printer device, and wherein the step of monitoring said predetermined consumption quantity and repeatedly comparing said consumption quantity to a threshold comprised disposing electrodes in said ink tank cassette and monitoring a current between said electrodes to identify when said ink in said ink tank cassette falls below a predetermined level, said predetermined level comprising said threshold.

7. A method as claimed in claim 1 wherein the step of monitoring a predetermined consumption quantity and repeatedly comparing said predetermined consumption quantity to a threshold comprises monitoring a plurality of different consumption quantities associated with said supply item and repeatedly comparing each of said plurality of predetermined consumption quantities to respective thresholds which are respectively reached before complete depletion of said supply item.

9. A method as claimed in claim 1 comprising including an order number in said ordering message, and electronically triggering said ordering routine at said data center dependent on said ordering number.

10. A method as claimed in claim 9 comprising selecting said ordering number from the group consisting of order codes for respectively different supply items and identification numbers for respectively different supply items.

11. A method as claimed in claim 9 comprising physically attaching an indicator representing said ordering number to said supply item.

12. A method as claimed in claim 11 comprising selecting said indicator dependent on a physical state of said supply item.

13. A method as claimed in claim 9 wherein said order number includes an identification number for an amount of said supply item.

14. A method as claimed in claim 9 wherein said order number contains a serial number of said device.

15. A method as claimed in claim 9 wherein said ordering number includes a number identifying a type of said supply item.

16. A method as claimed in claim 9 wherein said ordering number includes a number identifying an ordered amount of said supply item.

17. A method as claimed in claim 9 comprising including a checksum in said ordering message.

18. A method as claimed in claim 1 comprising encrypting said ordering message.

Claim 19 has been amended as follows:

19. A method as claimed in claim 1 comprising:

assigning a serial number to said device;

assigning respective, unique order numbers to different supply items;

allocating order numbers for respectively supply items, permissible for use by said device, to the serial number of said device and electronically storing the allocation at said data center;

including said serial number and said ordering number in said communication established from said device to said data center, and electronically encrypting said ordering message;

upon receipt of said ordering message at said data center, electronically decrypting said ordering message; and

at said data center after decrypting said ordering message, electronically checking authenticity of said ordering message using said serial number and using at least a part of said ordering number before filling said order.

20. A method as claimed in claim 19 comprising selecting said ordering number from the group consisting of ordering codes respectively associated with different supply items and identification numbers respectively associated with different supply items.

21. A method as claimed in claim 1 comprising generating a confirmation message at said data center when said order is filled, and transmitting said confirmation message from said data center to said device.

22. A method as claimed in claim 1 comprising automatically generating an invoice addressed to said ordering entity at said data center upon filling said order, and transmitting said invoice to said ordering entity.

23. A method as claimed in claim 1 wherein said ordering entity maintains an account accessible by said data center, and comprising the additional step of automatically debiting said account at said data center dependent on a price of said supply item upon filling said order.

24. A method as claimed in claim 1 comprising automatically generating said ordering message and establishing said communication from said device to said data center in a routine for automatic ordering, and allowing a user of said device to selectively disable said routine for automatic ordering.

25. A method as claimed in claim 24 comprising conducting an interrogation routine in said device upon initialization of said device and, within said interrogation routine, allowing for a user input into said device to selectively enable or disable said routine for automatic ordering.

26. A method as claimed in claim 1 wherein generating said ordering message and establishing said communication from said device to said data center are conducted in a routine for automatic ordering, and allowing remote disabling of said routine for automatic ordering by remote switching from said data center in a communication from said data center to said device.

27. An arrangement for ordering a supply item for a device, comprising:

a device which, during operation, consumes at least one supply item;

a monitor in said device for monitoring consumption of said supply item in said device and for generating a consumption quantity representing a degree of consumption of said supply item;

a control unit supplied with said consumption quantity which recognizes, dependent on said consumption quantity, a need to order said supply item before said supply item is completely consumed, and which generates an ordering message representing an order for said supply item and establishes a communication to a remote data center for transmitting said ordering message to order said supply item from said data center;

said control unit being adapted to receive a message from said remote data center indicating at said remote data center a check of authenticity of said ordering message has determined that said ordering message is not authentic and said control unit modifying operation of said device if upon receipt of said message from said remote data center.

28. An arrangement as claimed in claim 27 wherein said means for monitoring consumption of said supply item generates a consumption quantity indicative of a degree of consumption of said supply item and dependent on a type of said supply item.

29. An arrangement as claimed in claim 28 wherein said control unit compares said consumption quantity to a threshold and generates said ordering message and establishes said communication if said threshold is exceeded.

30. An arrangement as claimed in claim 29 wherein said device comprises an input unit for entering said threshold into said control unit, said input unit being selected from the group consisting of a keyboard connected to said control unit, a chip card and chip card reader connected to said control unit, and a modem connected to said control unit and communicable with said remote data center.

31. An arrangement as claimed in claim 27 wherein said control unit encrypts said ordering message.

32. An arrangement as claimed in claim 27 further comprising a display connected to said control unit and an input unit connected to said control unit, said control unit displaying said ordering message on said display before transmitting said ordering message to said remote data center, and said input unit allowing a user to modify said ordering message.

33. An arrangement as claimed in claim 32 wherein said keyboard allows suppression of said ordering message so that no ordering message is communicated to said remote data center.

34. An arrangement as claimed in claim 27 wherein said device is a printing device and comprises a printer which produces a plurality of imprints using an ink source as said supply item, said ink source having ink for producing a predetermined number of said imprints, and wherein said means for monitoring said supply item comprises a counter which counts a number of said imprints and which generates a count corresponding to said number of imprints and supplies said count to said control unit, and wherein said control unit generates said ordering message and establishes communication with said remote data center when said count reaches a value which is less than said total number of imprints.

35. An arrangement as claimed in claim 34 wherein said printer is a thermal printer and wherein said ink source is a thermal inking ribbon.

36. An arrangement as claimed in claim 34 wherein said printer is an ink jet printer and wherein said ink source is an ink tank cassette.

37. An arrangement as claimed in claim 31 further comprising a display connected to said control unit, and wherein said control unit displays a number of remaining imprints on said display each time said device is activated.

38. An arrangement as claimed in claim 31 further comprising a display connected to said control unit, and wherein said control unit displays a number of remaining imprints on said display each time said ink source is replaced.

39. An arrangement as claimed in claim 34 wherein said printer is an ink jet printer and wherein said ink source is an ink tank cassette containing ink therein at an ink level which changes dependent on the number of imprints made by said ink jet printer, and wherein said means for monitoring consumption comprises a sensor which identifies said ink level and wherein said control unit calculates a number of remaining imprints when said ink level, as sensed by said sensor, reaches a predetermined level.

40. An arrangement as claimed in claim 39 wherein said sensor comprises electrodes which interact with said ink in said ink tank cassette which supply a signal to said control unit, and further comprising an input unit connected to said control unit allowing input of characteristic information about said ink, and wherein said control unit calculates said number of remaining imprints dependent on said signal from said electrodes and said characteristic information about said ink.

42. An arrangement as claimed in claim 21 wherein said device comprises a display connected to said control unit, and wherein said control unit displays a message on said display if said ordering message is determined to be non-authentic.

RELATED APPEALS AND INTERFERENCES APPENDIX

None.

EVIDENCE APPENDIX

A: United States Patent No. 5,305,199 (LoBiondo et al.) - cited in the final Rejection dated December 21, 2005.

B: United States Patent No. 5,970,475 (Barnes et al.) - cited in the December 21, 2005 Office Action.

C: United States Patent No. 6,351,716 (Froger et al.) - discussed (but not specifically identified by number) in the December 21, 2005 Office Action.

D: Figures 1-6 of the application as originally filed.

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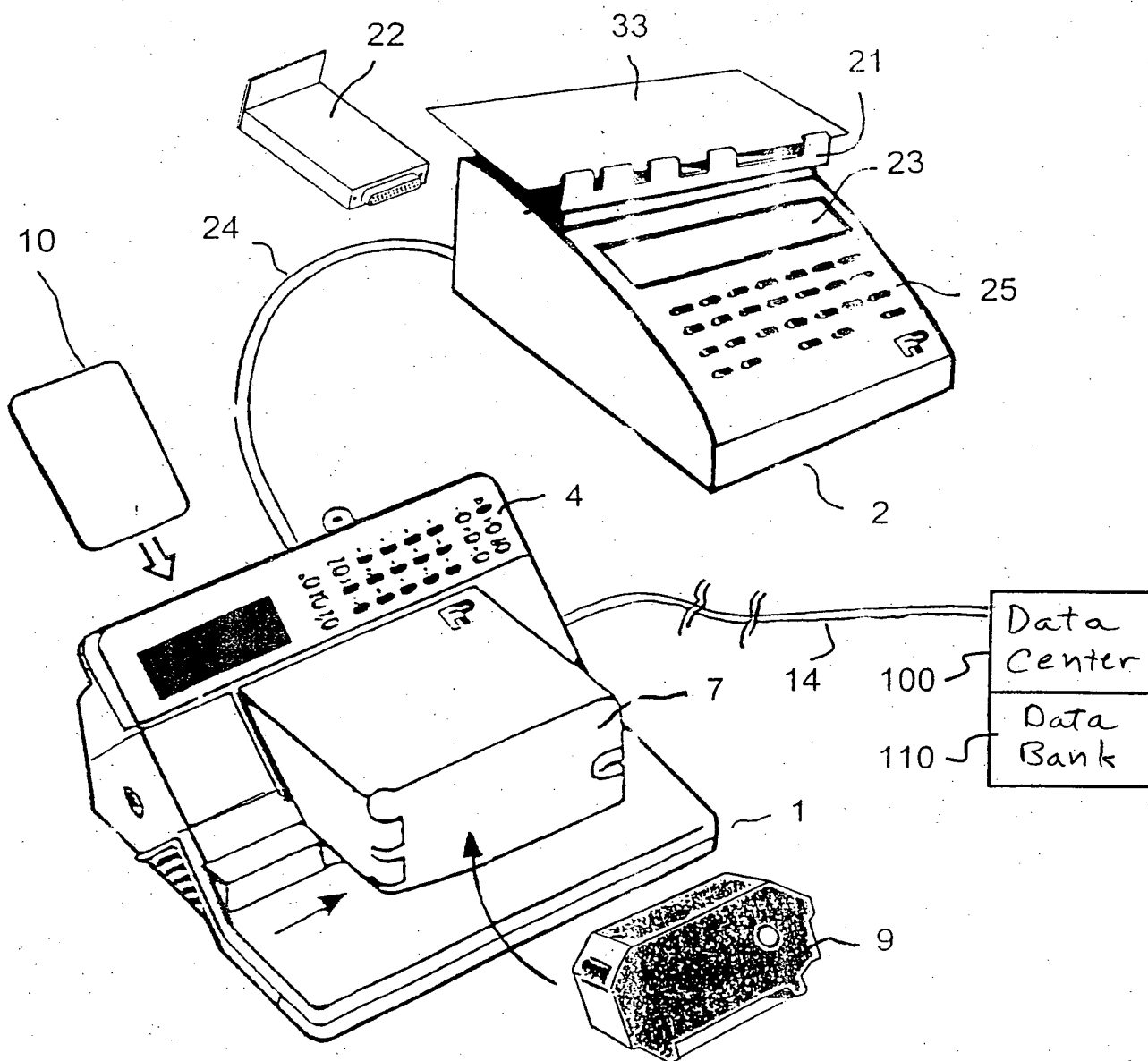


Fig. 1

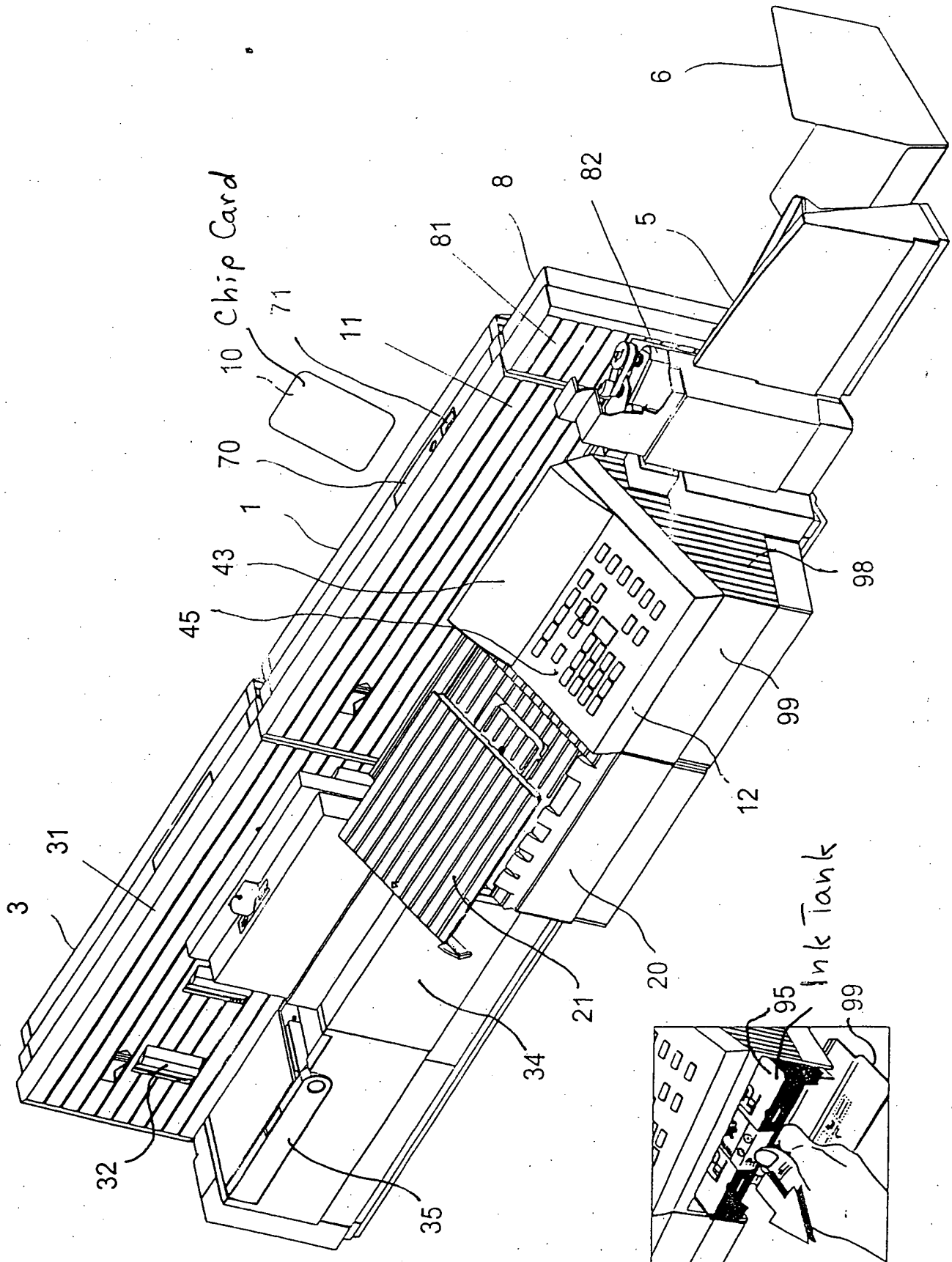


Fig. 4

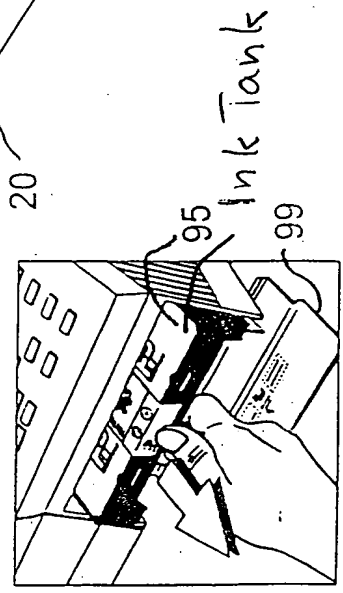


Fig. 5

